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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,960	10/17/2001	Mike Reeves	53921/128	4005

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MCCARTHY TETRAULT LLP
SUITE 4900, P.O. BOX 48
66 WELLINGTON ST. WEST
TORONTO, ON M5K 1E6
CANADA

EXAMINER	
MURPHY, RHONDA L	
ART UNIT	**PAPER NUMBER**
2667	

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/977,960	REEVES ET AL.	
	Examiner	Art Unit	
	Rhonda Murphy	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-6 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-6 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 17 October 2001 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☒ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 6/27/05.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in on October 17, 2001. It is noted, however, that applicant has not filed a certified copy of the foreign priority application as required by 35 U.S.C. 119(b).

Specification

1. The disclosure is objected to because the second paragraph of page 12 contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Ma (US 2005,0083936).

Regarding claim 1, Ma teaches a method of operating a communications network having a plurality of interconnected nodes, the method comprising: establishing a connection path from an ingress node to an egress node through a plurality of intermediate nodes (Fig. 1, page 1, paragraph 6-7); associating said connection path with a network-wide unique identification (page 4, paragraph 32; global path identifier); on said ingress node, storing said path identification so as to indicate that said path originates at said ingress node (page 4, paragraph 32; an ingress router sends an object to the nodes of the path to setup routes by caching the next hop in an EFIB table in each router along the route); on each said intermediate node, storing said path identification so as to indicate that said path transits said intermediate node (page 4, paragraph 32; caching the next hop in an EFIB table in each router along the route); and on said egress node, storing said path identification so as to indicate that said path terminates at said ingress node (page 4, paragraph 32; caching the next hop in an EFIB table in each router along the route).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2 - 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma (US 2005,0083936) in view of McAllister et al. (US 6,697,329).

Regarding claim 2, Ma teaches the step of establishing a connection path.

Ma fails to explicitly teach signaling a connection set-up request from the ingress nodes through the intermediate nodes to the egress nodes. However, the step of signaling a connection set-up request is well known in the art for establishing connections between nodes.

Furthermore, McAllister teaches establishing a connection path that includes signaling a connection set-up request from said ingress node through said intermediate nodes to said egress node (col. 3, lines 37-50).

In view of this, it would have been obvious to one skilled in the art to modify Ma's method by signaling a connection set-up request through the nodes, in order to establish a connection between nodes and identifying the intermediate nodes that lie in between.

Regarding claim 3, Ma teaches the step of establishing a connection path.

Ma fails to explicitly teach signaling an acknowledgement from said egress node through said intermediate nodes to said ingress node in response to said connection set-up request.

However, McAllister teaches signaling an acknowledgement from said egress node through said intermediate nodes to said ingress node in response to said connection set-up request (col. 9, lines 6-10).

In view of this, it would have been obvious to one skilled in the art to modify Ma's method by signaling an acknowledgement from the egress node, for the purpose of indicating the connection was successfully established.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karol et al. (US 6,628, 617) in view of Saunders et al. (US Pub 2002/0097463).

Regarding claim 4, Karol teaches providing a forwarding table (forwarding database 432) wherein each network address is associated with a single interface index which dictates an output port and a connection over which corresponding connectionless packets should transported (col. 7, lines 35-40),

forwarding a connectionless packet to an output port based on an interface index obtained from the forwarding table (col. 8, lines 62-67; col. 9, lines 1-20) and transmitting the connectionless packets over the corresponding connections (col. 7, lines 36-41);

maintaining a routing table for routing connectionless packets over a connection-oriented network (col. 7, lines 60-67; col. 8, lines 1-2), said routing table associating each network address with one or more interface indexes (col. 7, lines 36-41; routing tables are known in the art for corresponding addresses with output ports);

associating each interface index with an application, one application being connectionless routing and one application being connection-oriented (each output port is associated with an application being connectionless routing, col. 7, lines 36-41; and an application being connection-oriented col. 7, lines 42-54), and

downloading interface indexes from said routing table to corresponding entries in said forwarding table (col. 7, lines 36-41; obtaining outputs from routing tables that relate to entries in a forwarding table are well known in the art for outputting data to the appropriate destination).

Karol fails to explicitly disclose associating an interface index with an application being label switching.

However, Karol discloses a connection-oriented network as an MPLS network (col. 2, lines 52-53).

In view of this, it would have been obvious to one skilled in the art to include a label switching application as the connection-oriented application associated with the index, for the purpose of outputting labeled data that enables faster switching speeds.

Karol fails to explicitly disclose downloading indexes such that a label switching application having a higher priority than the connectionless routing application.

However, Saunders teaches determining outgoing ports according to an MPLS priority order associated with the desired class of service (page 7, paragraph 78).

Therefore, it would have been obvious to one skilled in the art to include a label switching application having a higher priority than the connectionless routing application, since MPLS allows the precedence of class of service to be inferred from the label.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karol et al. (US 6,628, 617) in view of Feldman et al. (US 6,055,561) and Saunders et al. (US Pub 2002/0097463).

Regarding claim 5, Karol teaches a method of transmitting packets, including: receiving (a) connection-oriented packets having a label associated therewith, said label being a connection identifier (Figs.1 and 4; col. 6, lines 15-20; col. 7, lines 18-29; ATM

cells inherently include connection identifiers), and (b) connectionless packets carrying a network address and having no label associated therewith (IP packets; see Abstract lines 1-6);

providing a forwarding table (forwarding database 432) wherein each network address is associated with a single interface index which dictates an output port and a connection over which corresponding connectionless packets should transported (col. 7, lines 35-40),

providing a switching table (flow database 433; col. 7, lines 42-54);

forwarding a connectionless packet to an output port based on an interface index obtained from the forwarding table (col. 8, lines 62-67; col. 9, lines 1-20);

forwarding a connection-oriented packet to an output port based on said switching table (col. 7, lines 42-54) ;

transmitting connection-oriented and connectionless packets over the corresponding connections (col. 7, lines 42-47, connection-oriented packets; col. 7, lines 36-41, connectionless packets);

maintaining a routing table for routing connectionless packets over a connection-oriented network (col. 7, lines 60-67; col. 8, lines 1-2), said routing table associating each network address with one or more interface indexes (col. 7, lines 36-41; routing tables are known in the art for corresponding addresses with output ports);

associating each interface index with an application, one application being connectionless routing and one application being connection-oriented (each output port

is associated with an application being connectionless routing, col. 7, lines 36-41; and an application being connection-oriented col. 7, lines 42-54), and

downloading interface indexes from said routing table to corresponding entries in said forwarding table (col. 7, lines 36-41; obtaining outputs from routing tables that relate to entries in a forwarding table are well known in the art for outputting data to the appropriate destination).

Karol fails to explicitly disclose switching ingress labels into egress labels. Such switching of labels in MPLS networks is known in the art.

Furthermore, Feldman teaches switching ingress labels into egress labels (col. 4, lines 6-9).

Therefore, it would have been obvious to one skilled in the art to incorporate the switching of ingress labels into egress labels, so as to appropriately transport data from input ports to output ports.

Karol fails to explicitly disclose associating an interface index with an application being label switching.

However, Karol discloses a connection-oriented network as an MPLS network (col. 2, lines 52-53).

In view of this, it would have been obvious to one skilled in the art to include a label switching application as the connection-oriented application associated with the index, for the purpose of labeling and outputting data to enables faster switching speeds.

Karol fails to explicitly disclose downloading indexes such that a label switching application having a higher priority than the connectionless routing application.

However, Saunders teaches determining outgoing ports according to an MPLS priority order associated with the desired class of service (page 7, paragraph 78).

Therefore, it would have been obvious to one skilled in the art to include a label switching application having a higher priority than the connectionless routing application, since MPLS allows the precedence of class of service to be inferred from the label.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karol et al. (US 6,628,617) in view of Saunders et al. (US Pub 2002/0097463).

Regarding claim 6, Karol teaches a network node (Fig. 4, CL-CO gateway 140), comprising: a plurality of input and output ports operative to receive and transmit packets carrying a connection identifier for transport over a connection-oriented network (input line cards 401 and output line cards 402; col. 7, lines 18-29; ATM cells inherently include virtual circuit identifiers));

switching logic for switching said connection-oriented packets from one of said input ports to one of said output ports based on one of said connection identifiers (flow database 433; col. 7, lines 42-54);

segmentation and re-assembly logic for enabling said ports to assemble connectionless packets from the payloads of one or more connection-oriented packets on ingress (col. 7, lines 14-17; segmentation and re-assembly is a well known process

for connection-oriented packets) and to segment each such connectionless packet into one or more connection-oriented packets on egress (col. 7, lines 14-17), each said message packet carrying a network address for transport over a connectionless network (col. 9, lines 26-36; also col. 7, lines 36-41, destination IP address);

forwarding logic for forwarding connectionless packets from one of said input ports to one of said output ports (col. 7, lines 35-40), said forwarding logic including a forwarding table (forwarding database 432) which associates a network address or a group of network addresses with a single interface index (col. 7, lines 35-40), said interface index indicating the identity of one of said output ports (col. 7, lines 35-40) and enabling a connection identifier to be specified for segmentation of the connectionless packet at the indicated output port (col. 7, lines 14-20; ATM cells inherently include connection identifiers);

routing logic for forwarding a connectionless packet to a next-hop based on the network address carried by the packet (col. 7, lines 35-40), said logic including a routing table which associates a network address or group thereof with at least one interface index (col. 7, lines 35-40, 60-67; col. 8, lines 1-2), said logic being enabled to download an interface index for a given network address or group thereof from said routing table to the same network address entry in said forwarding table time (col. 7, lines 36-41; obtaining outputs from routing tables that relate to entries in a forwarding table are well known in the art for outputting data to the appropriate destination), and

logic for setting up a path wherein a connectionless packet is associated with a connection identifier which functions as a label so that transit nodes in the path can

switch the connection-orientated packets constituting connectionless packets based on the connection identifier without re-assembling the connectionless packets (col. 7, lines 14-29), said logic associating the path with an interface index (the path must be associated with an index for identifying the output);

and wherein said routing logic does not overwrite a forwarding table entry having an interface index associated with a path with an interface index associated with connectionless routing (col. 15, lines 66-67; col. 16, lines 1-9).

Although Karol fails to explicitly disclose setting up a label switched path, Karol discloses a connection-oriented network as an MPLS network which inherently includes label switched paths col. 2, lines 52-53).

Therefore, it would have been obvious to one skilled in the art to incorporate label switched paths into the system, for the purpose of labeling and outputting data to enables faster switching speeds.

Karol fails to explicitly disclose interface indexes associated with a priority hierarchy in which interface indexes associated with label switched paths have a higher priority than interface indexes associated with connectionless routing.

However, Saunders teaches determining outgoing ports according to an MPLS priority order associated with the desired class of service (page 7, paragraph 78).

Therefore, it would have been obvious to one skilled in the art to include label switched paths having a higher priority than the connectionless routing application, since MPLS allows the precedence of class of service to be inferred from the label.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

*Mauger et al. (US 6,882,643) discloses supporting multiple services in label switched networks.

*Mauger et al. (US 6,778,494) discloses a label switched media gateway and network.

*Mendelson et al. (US 6,343,083) discloses a method and apparatus for supporting a connectionless communication protocol over an ATM network.

*Ohba et al. (US 2002/0176370) discloses a scheme for label switched path loop detection at node device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rhonda Murphy whose telephone number is (571) 272-3185. The examiner can normally be reached on Monday - Friday 8:00 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rhonda Murphy
Examiner
Art Unit 2667

rlm

CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

8/3/05